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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,850	03/02/2005	Colin Christopher Giles	J3685(C)	9359
201 7590 12/11/2009 UNILEVER PATENT GROUP 800 SYLVAN AVENUE AG West S. Wing ENGLEWOOD CLIFFS, NJ 07632-3100				
EXAMINER FOLEY, SHANON A				
ART UNIT		PAPER NUMBER		
1619				
NOTIFICATION DATE		DELIVERY MODE		
12/11/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentgroupus@unilever.com

### Office Action Summary

**Application No.**

10/526,850

**Applicant(s)**

GILES ET AL.

**Examiner**

SHANON A. FOLEY

**Art Unit**

1619

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 8/19/09

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on August 19, 2009 was filed after the mailing date of the first action on the merits on May 19, 2009. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7 and 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al. (US 4,983,418) and Beauquey et al. (US 5,846,549, cited in the IDS).

Instant claim 1 has been amended to require a new limitation that the hair treatment composition comprises at least 20% water.

Murphy et al. teach a hair treatment conditioning composition comprising dispersion of hectorite, a particularly preferred cationic quaternary surfactant, quaternarium-18 (which is also a preferred cationic surfactant according to paragraph [0078] of the instant disclosure, therefore meeting the formula recited in the claim) and a silicone elastomer. See column 9, lines 3-5, claims 1-7 and 15-21. Murphy et al. also teach a method of treating hair by applying the composition to the hair or scalp, see column 8, lines 18-32. Since the hair conditioner of Murphy et al. is applied to hair to maintain a temporary styling, the conditioner can be removed by a rinse

with water. Murphy et al. also teach a method of preparing the hair treatment composition by dispersing the composite particles and combining the dispersion with the remaining treatment ingredients without first drying the aqueous dispersion of particles, see column 8, lines 3-12. Murphy et al. also teach that the weight percent of the hectorite present is between 0.05 to 5%, the percent weight of the silicone elastomer is between 0.05 to 10% claims 1 and 15.

Although Murphy et al. do not teach the total percent weight of the composite particles of hectorite, quarternarium-18 and silicone elastomer or the median diameter of the particle size, it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to have determined the particle sizes at which the composite particles are most effective. The result-effective adjustment in conventional working parameters (e.g., determining the appropriate weight percentages, particle sizes, weight ratios, etc. within the composition) is deemed merely a matter of judicious selection and routine optimization, which is well within the purview of the ordinary artisan.

Murphy et al. do not teach a water-based composition, or a composition comprising at least 20% water.

Beauquy et al. describes water-based hair formulations comprising at least 20% water, see the working examples.

One of ordinary skill in the art at the time the invention was made would have been motivated to disperse the hectorite, cationic quaternary surfactant, quaternarium-18 and the silicone elastomer of Murphy et al. into the water carrier of Beauquy et al. to clean the hair, scalp or skin, see column 2, lines 3-6 and claim 22 of Beauquy et al. One of ordinary skill in the art at the time the invention was made would have had a reasonable expectation of success

for combining the ingredients of Murphy et al. into the water carrier of Beauquey et al. because both references incorporate hectorite clays, insoluble silicone agents and cationic surfactants to treat hair, see the previous citations of Murphy et al. and column 3, line 45 to column 4, line 22 and lines 59-64, as well as claims 1, 12, 22 and 26 of Beauquey et al.

Claims 6, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al. and Beauquey et al. as applied to claims 1-5, 7 and 9-16 above, and further in view of Midha et al. (USPqPub 2002/0034486).

Instant claim 6 requires that the charged organic molecule is the cation of alkyl trimethyl ammonium chloride, wherein the alkyl chain comprises 12 to 22 carbon atoms. Instant claims 18 and 19 state that the hair benefit agent is a finely divided solid comprising zinc pyrithione.

See the teachings of Murphy et al. and Beauquey et al. above. Murphy et al. and Beauquey et al. do not teach or suggest alkyl trimethyl ammonium chloride, wherein the alkyl chain comprises 12 to 22 carbon atoms or zinc pyrithione.

However, Midha et al. teach that the alkyl trimethyl ammonium chloride may have an alkyl chain of at least 16 carbon atoms, see paragraph 0191. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have substituted the alkyl trimethyl ammonium chloride of Midha et al. for the quarternarium-18 of Murphy et al. and Beauquey et al. with a reasonable expectation of success since both ingredients are functionally equivalent cationic surfactants used to condition hair, see paragraph 0190-0191 and claim 30 of Midha et al.

Midha et al. also teach the inclusion of zinc pyrithione, see paragraphs 0259 and 0264.

One of ordinary skill in the art at the time the invention was made would have been motivated to have incorporated the zinc pyrithione of Midha et al. in the hair conditioner of Murphy et al. and Beauquey et al. to treat dandruff, see paragraph 0264 of Midha et al. One of ordinary skill in the art at the time the invention was made would have had a reasonable expectation of success for combining the zinc pyrithione of Midha et al. into the composition of Murphy et al. and Beauquey et al. since Midha et al., Murphy and Beauquey et al. teach hair conditioners comprising functionally equivalent cationic surfactants (alkyl trimethyl ammonium chloride and quarternarium-18); hectorite, see paragraph 0023 of Midha et al.; and silicones, see paragraphs 0022, 0041, 0055 and 0128 of Midha et al.

Therefore, the invention would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, absent unexpected results to the contrary.

#### ***Response to Arguments***

Applicant argues that the composition of Murphy et al. differs from the instant invention in **three ways**:

- 1) The compositions are spray-based, not water-based.

Applicant's arguments have been fully considered, but are found unpersuasive. Instant claim 1 requires a compatible aqueous carrier in line 17. Additionally, the previously pending claim 1 only required an aqueous dispersion. Since the ethanol solvent of Murphy et al. is obviously aqueous and is compatible with the clay, cationic quaternary surfactant and a silicone elastomer, the liquid used by Murphy et al. met the required aqueous ingredient instantly claimed. Since claim 1 has been instantly amended to require water as the aqueous carrier in a

quantity of at least 20%, the teachings of Beauquey et al. inspire a substitution of the ethanol carrier of Murphy et al. with water.

2) The dispersing agent for the silicone does not comprise a separate clay and a separate charged organic with neutralizing charges. The hydrophobically modified particles of Murphy et al. are ionically charged and do not “entrap” the benefit agent the way the instant formulation does. Applicant argues that Murphy et al. is only interested in fine particle dispersion with these particles and does not teach the same composite particles instantly claimed. Applicant adds that the clay materials and the cationic quaternary surfactant used by Murphy et al. are not the same as the composite materials of the instant invention. Applicant supplies print-outs to websites discussing the ingredients used by Murphy et al.

Applicant's arguments and a review of Murphy et al. have been fully considered, but are found unpersuasive. The hectorite clay of Murphy et al. has a net negatively charged surface. These teachings meet the requirements of instant claims 1, 4 and 5 with regard to the clay. The cationic quaternary surfactant, quaternarium-18, of Murphy et al. has a net positive charge. These teachings meet the requirements of instant claims 1, 4 and 7 with regard to the cationic quaternary surfactant required. While it is noted that applicant argues that the clay and the cationic quaternary surfactant of Murphy et al. are distinct, it is noted that hectorite is the specific clay required in instant claim 5 and that the cationic quaternary surfactant, quaternarium-18, used by Murphy et al., is disclosed as a preferred cationic surfactant according to paragraph [0078] of the instant published disclosure.

Murphy et al. explicitly teaches premixing the hydrophobically-modified clay, hectorite, with the silicone elastomer. This step is accomplished before the addition of the other ingredients, i.e., the cationic quaternary surfactant. See column 8, lines 8-12. These teachings meet the requirements of instant claims 12 and 13.

While Murphy et al. do not teach entrapment of the silicone elastomer, it is noted that the instant claims do not require entrapment of any sort. The claims merely require a composite particle. Since the addition of the clay has a net negative charge and the cationic quaternary surfactant has a net positive charge, it is inherent that these ingredients would bind to form a composite material, as required in lines 15-16 of instant claim 1.

Therefore, Murphy et al. teach the ingredients and the method steps required by the instant claims. Differences between Murphy et al. and the instant claims are discussed above in the new rejection of record, precipitated by applicant's amendment.

**3)** There is no teaching of an "aqueous dispersion" in Murphy et al., as required in column 8, lines 3-12.

A review of Murphy et al. has been fully considered, but does not support applicant's assertion. Murphy et al. disperses the clay and the silicone in claim 1. Support for this limitation is found at column 8, lines 8-12.

With regard to the teachings of Midha, applicant asserts that the reference does not remedy the deficiencies of Murphy. However, since there do not appear to be any deficiencies to remedy, the teachings of Midha et al. remain of pertinence in the grounds of rejection of record.



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANON A. FOLEY whose telephone number is (571)272-0898. The examiner can normally be reached on flex, generally M-F 7AM - 3 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne L. Eyler can be reached on (571) 272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shanon A. Foley/  
Primary Examiner  
Art Unit 1619